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AUTHORITY
AGO D/A ltr, 29 Apr 1980

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DEPARTMENT OF THE ARMY
OFFICE OF THE ADJUTANT GENERAL
WASHINGTON, D.C. 20310

IN REPLY REFER TO

[Signature]

AGDA (M) (17 Jun 70) FOR OT UT 701151

19 June 1970

3011280

SUBJECT: Operational Report - Lessons Learned, Headquarters, 361st Signal Battalion, Period Ending 31 January 1970

SEE DISTRIBUTION

1. Subject report is forwarded for review and evaluation in accordance with paragraph 4b, AR 525-15. Information of actions initiated as a result of subject report should be forwarded to ACSFOR OT UT within 90 days of receipt of covering letter.

2. Information contained in this report is provided to insure appropriate benefits in the future from lessons learned during current operations and may be adapted for use in developing training material.

BY ORDER OF THE SECRETARY OF THE ARMY:

Kenneth G. Wickham DDC
KENNETH G. WICKHAM
Major General, USA
The Adjutant General
[Handwritten signature over stamp]
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DEPARTMENT OF THE ARMY
Headquarters 361st Signal Battalion
APO San Francisco 96392

RGCRCN-CO

2 February 1970

SUBJECT: Operational Report - Lessons Learned 361st Signal Battalion,
Period Ending 31 January 1970, RCS CEFOR-65 (R2)

Commander in Chief, United States Army Pacific, ATTN: GPOP-OT, APO 96588
Commanding General, United States Army Vietnam, ATTN: AVHGC-DH, APO 96375
Commanding General, USASTRATCOM-PAC, Schofield Barracks, Hawaii, APO 96557
Commanding General, 1st Signal Brigade, (USASTRATCOM), ATTN: SCCVOP,
AFO 96384
Commanding Officer, USA Regional Communications Group (Vietnam), ATTN:
SCCPV-RG-MO, AFO 96243

1. Operations: Significant Activities.

a. The nature of the 361st Signal Battalion as the operator of a long haul communications network precludes engagement of this unit in the typical training and operational activities found in combat oriented units. The 361st Signal Battalion schedules mandatory individual training on a weekly basis. Mission-related training consists of a continuous informal OJT program at all sites. In addition 102 members of the battalion participated in 233 hours of formal OJT conducted at the sites while 40 persons attended formal classes averaging six days in length and conducted at 1st Signal Brigade schools. Another 64 men attended the ICS orientation course conducted by the battalion. Operational functions at all installations of the 361st Signal Battalion are carried out on a 24 hour, 7 day a week basis. Within this framework the battalion has carried out 92 days of operations during the last reporting period.

b. The installation of the AN/GRC-170 Van on the Pleiku-Warrin link was completed on 20 November 1969. The AN/GRC-170 Van represents a solid state modification of the AN/MIC-85 by the replacement of the REL 2500 low level tube type radio frequency equipment thereby providing a reduction in maintenance and more stable communications.

c. The deactivation of Dong Ha site #68 is now complete. All circuits at Dong Ha were terminated as of 0900Z on 30 November 1969, and on 3 December 1969 at 2330Z the FRC-109 was turned off. During the first half of December the defensive revetments were removed. All

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the AN/TSC-82 Vans were removed from the site by 28 December 1969 and airlifted to Bien Hoa. This site deactivation affecting 120 circuits was due to the large number of subscribers who terminated their facilities in preparation for unit movements or troop withdrawals. The Dong Ha personnel were relocated in Long Binh for TDY restoring the AN/TSC-82 Vans to operational status.

d. The cutover of the Pleiku tandem switch was begun on 28 November 1969 and completed nine days ahead of schedule on 8 December 1969. The formal dedication ceremonies took place on 15 December 1969. The 361st Signal Battalion is responsible for 132 of the 202 circuits which were cutover. The remaining 70 circuits bypass the Pleiku EE and go directly to the DTE. The activation of the Pleiku tandem switch completes the Southeast Asia Automatic Telephone System (SEA-ATS). The SEA-ATS is an integrated common user telephone network designed to provide direct long distance dial service in support of all United States military and other authorized Free World Forces on the mainland of Southeast Asia.

e. On 1 December 1969 a 60-day trial period was implemented during which time military personnel assumed complete operation and maintenance responsibility for all systems equipment located at the 7 nodal ICS sites which are currently provided on-site O&M by Page personnel. This action was designed to establish the ability of the 361st Signal Battalion technicians to completely take over the contractor functions. Contractor personnel remained on-site to observe the military performance and provide assistance if requested. The military personnel were completely self-sufficient and called on the contractor for assistance only in times of extreme emergency. The trial period was terminated on 31 January 1970. The capability of the military to operate and maintain all systems equipment in the ICS is now being assessed, and after-action reports are being prepared.

f. The 361st Signal Battalion in cooperation with units from the 12th Signal Group and the 160th Signal Group began deactivation of the Da Nang old control on 10 December 1969. The deactivation was completed at 0230Z on 13 January 1970. Circuits requiring control facilities are now routed through the Da Nang TCG. The cutover upgrades the ICS network in this area to meet DCA-ICS specifications and affects 108 VF and 35 DC circuits.

g. In a change of command ceremony conducted on 7 January 1970, LTC George D. Brosious assumed command of the 361st Signal Battalion from LTC Emmett Paige, Jr.

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h. Continued consolidation of the Communications/Electronics Prescribed Load List has been in progress during the last quarter. The renovation of the supply/maintenance organization of the battalion was occasioned by a critical shortage of trained supply personnel and duplication of effort. This problem is steadily being alleviated. Company A and Company B have completed consolidation of their supply/maintenance facilities at their headquarters at Nha Trang and Da Nang respectively. At the present time the Company C facility is consolidated at Vung Chua Mountain. This facility will be moved to the company headquarters at Qui Nhon by the end of the fiscal year.

i. In conjunction with the 1st Signal Brigade program of preparation for TET 1970, the 361st Signal Battalion has instituted a program of site defense renovation. Emphasis has been placed on improving bunkers and revetments by reinforcing sandbags with concrete or other material to prevent deterioration by natural elements. Perimeter wire has been repaired or replaced as needed at all sites, and additional lighting has either been installed or work orders have been submitted to PA&E. Each company in the Battalion is sending representatives to attend the 1st Cavalry's course on defense of installations at the tactical level being conducted at Phuoc Vinh.

2. Lessons Learned: Commander's Observations, Evaluations, and Recommendations.

a. Personnel. None.

b. Intelligence. None.

c. Operations. None.

d. Organization. None.

e. Training. None.

f. Logistics.

(1) Trane Air Conditioners.

(a) OBSERVATION. Supply repair parts for Trane Air Conditioners (models: MAC6V60 and MAC6V40) used in AN/TSC-82 Vans are not available through normal supply channels without extended delays. The supplier of these parts is Trane Manufacturing Company, Lacrosse, Wisconsin.

(b) EVALUATION. These air conditioners are essential for operation

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of these vans and the possibility of losing them for any length of time could seriously affect the communications capability of the vans.

(c) RECOMMENDATION. That a supply list of all parts to include FSN and manufacturers part number be initiated and issued to all sites having AN/TSC-82 Vans and logistics support activities.

g. Communications.

(1) Oil Filters.

(a) OBSERVATION. It has been observed at Dong Ba Thin, Site #73, that the cloth type oil filter, FSN 2940-580-62E3, after approximately 60 hours of use caused excessive oil consumption on generators. One generator had operated for 2000 hours being serviced every 100 hours. It was utilizing a paper structure type oil filter and oil consumption was one quart every 100 hours. When cloth type filters were used after the paper type was exhausted, consumption went up to two quarts every 48 hours.

(b) EVALUATION. Utilization of cloth oil filters results in excessive oil consumption which in turn could be harmful to generators. Subsequently more maintenance is required.

(c) RECOMMENDATION. That paper type oil filters, FSN 2940-884-4801, be utilized in place of the cloth type.

(2) Circuit Logs.

(a) OBSERVATION. A 1C circuit was logged out with TSN. DNG was notified of the outage by GDH, not TSN, when DNG was requested to assist in troubleshooting the circuit. As the circuit was logged out with TSN, which is a DCA reporting station, no trouble ticket was maintained at DNG. Later the problem was found to be at DNG who picked up the outage from TSN and was at a loss as to what troubleshooting had actually been done.

(b) EVALUATION. The trouble ticket maintained by the reporting station contains information concerning not only the routing, priority, and initial reason for outage but also lists all work done by that station to locate and correct the actual reason for outage. The distant station did not have an information copy of this trouble ticket, and hence they did not know what information had been yielded by troubleshooting at the other end. The result was unnecessary delay in restoration of the circuit, since the distant station had to initiate tests to obtain

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information which was already available at the local station.

(c) RECOMMENDATION. An information copy of the trouble ticket should be provided to the distant station whenever troubleshooting any high priority circuit. This INFO copy will preclude duplication of effort and subsequently result in faster circuit restoral.

(3) Power Cable Installation Deficiency.

(a) OBSERVATION. A power cable was improperly installed at the Da Nang Air Base EE Powerhouse.

(b) EVALUATION. A 350 MCM, 4 conductor, solid copper, PVC, direct burial cable which interconnected the ICS power plant and the outside power distribution panel adjacent to the AN/MRC-85 Vans completely shorted out. This cable provided the power, approximately 5KW, for the DNG old control. An immediate drop of 40 KW was observed, however, when the main circuit breaker, which controlled this cable, was shut off. Exhuming the cable revealed that the cable had been shorted to its sheath in 3 places approximately 150 feet apart. Two of the three shorted sections of cable revealed a kink in the armor covering which had been wrapped with black plastic tape at the time of installation.

(c) RECOMMENDATION. A careful inspection of all equipment which is to be hidden from view should be made upon installation. This precaution will enable correction of shortcomings in workmanship that could cause future equipment failure.

(4) Proper Operation of "A" Scan Scope.

(a) OBSERVATION. Proper operation of an "A" scan scope is enhanced when it is mounted a minimum of ten inches away from the data analyzer. When the two are allowed to remain in closer proximity, a severe attenuation of the vertical signal occurs.

(b) EVALUATION. This observation has been reported by only one source. The problem was corrected by mounting the "A" scan scope and data analyzer on separate racks.

(c) RECOMMENDATION. Further technical investigation of this observation and solution is warranted. All sites should be informed of this one site's experience and a study of their experience with the same test situation should be initiated.

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(5) ARVN Personnel.

(a) OBSERVATION. A limited number of Vietnamese Army Tech Controllers have been assigned to the 361st Signal Battalion as part of a program to train ARVN's in all aspects of the ICS. At site level each of these Tech Controllers is paired with an American counterpart who becomes his buddy. The effectiveness of this buddy system is demonstrated by the excellent working knowledge of local Tech Control that these Vietnamese personnel have acquired. A language barrier often exists, however, when ARVN Tech Controllers are coordinating with American Tech Controllers at other sites where ARVN Tech Controllers are not assigned.

(b) EVALUATION. When coordinating with another Tech Control, the ARVN's have difficulty understanding U.S. personnel and vice versa. This obstacle hampers their efficiency in maintaining and restoring communications and fails to functionally train ARVN Tech Controllers in proper and efficient coordination with a distant end.

(c) RECOMMENDATION. Vietnamese Tech Controllers should be assigned to all sites to enable ARVN's at any site to coordinate with ARVN's at a distant end. In this manner language barriers would be eliminated as a significant problem for ARVN's working Tech Control. They could still confer with their American buddy when encountering difficulties.

h. Material. None.

i. Other. None.

-1-Incl-
~~Itr RGCRCN-CO-0, 1 Feb 70~~
Incl 1 wd HQ, DA

George D. Brosius
GEORGE D. BROSIUS
LTC, SigC
Commanding

SCCPV-RG-PT-MO (2 Feb 70) 1st Ind

SUBJECT: Operational Report - Lessons Learned, 361st Signal Battalion
Period Ending 31 Jan 70, RCS CSFOR-65 (R2)

Headquarters, USASTRATCOM Regional Communications Group (Vietnam),
APO 96243, 28 February 1970

TO: Assistant Chief of Staff for Force Development, Department of the
Army, Washington D.C. 20310
Commanding General, 1st Sig Bde (USASTRATCOM), ATTN: SCCPV-OP-AD,
APO 96384

1. Subject report is forwarded in accordance with AR 525-15.
2. This headquarters has reviewed the report and basically concurs with it.
3. Following are corrections and/or comments concerning referenced paragraphs:

a. Section 1. Operations:

- (1) Para 1d, Page 2: The Pleiku Tandem Switch was cutover on 7 December 1969, and all circuit actions were completed 8 days ahead of schedule.
- (2) Para 1e, Page 2: The 60 day OEM Trial Period, LOI 1-70, has been extended through 31 March 1970.
- (3) Para 1f, Page 2: "deadivation" should be "deactivation".

b. Section 2. Lessons Learned:

- (1) Para 2f(1), Page 3: Trans Air Conditioners - All Units operating TN/TSC-82 systems have in their possession the manufacturer's manual for air conditioners which contains the recommended spare parts list for the 36,000 and 60,000 BTU Air Conditioner. Copies of TM5-4120-268-15 have been forwarded to all units. Several parts were turned over to 1st Log Command for these air conditioners to control the issue and create record of demands. Units are aware of the existence of these parts. No TMs for repair parts have been published for these air conditioners. In response to our letter exposing the discrepancies found in the parts manual published by the manufacturer and the parts received in-country, 1st Signal Brigade has contacted the MEUNM representative to take action in obtaining the correct manuals and to expedite receipt of the right parts for the Trans air conditioners.

SCCPV-RG-PT-MO

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(2) Para 2g(1), Page 4: Oil Filters - This same problem has been encountered by AN/TSC-82 Sites at Sa Dec and D1 An. The cloth type filter has been issued to the units by the DSU's when stocks of paper type filters were depleted. The paper type filter to be used as recommended by the TM and incorporated in the PLL is FSN 2940-555-6348. The filter recommended by DBT (2940-881-4801) is a substitution and can also be used. All units have been advised to contact the DSU and explain the problem created when the cloth type filter is used and request the paper type filter be requisitioned and stocked.

(3) Para 2g(1), Page 4: This should be listed under para 2f, Logistics.

(4) Para 2g(2), Page 4; Para 2g(3), and 2g(4), Page 5: These should be listed under para 2c, Operations.

(5) Para 2g(4), Page 5: Proper Operation of "A" Scan Scope - Non Concur. Similar A-scan scope installation exist at all other ICS sites in Vietnam, without Problems. Trouble reported is suspected to be a defective unit. The site has been advised to have the unit inspected by the supporting repair facility.

(6) Para 2g(5), Page 6: This should be listed under 2e, Training.

WILLIAM D. LEWIS
LTC, SigC
Deputy Commander

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SCCPV-OP-AD (2 Feb 70) 2d Ind

SUBJECT: Operational Report - Lessons Learned of Headquarters, 361st
Signal Battalion for Period Ending 31 January 1970, AGC
CSFOR-65 (R2)

DA, HQ, 1st Signal Brigade (USA STRATCOM), APO 96384 10 March 1970

TO: Commanding General, United States Army, Vietnam, ATTN: AVHGC-DST,
APO 96375

1. Subject report is forwarded in accordance with AR 525-15.

2. The following comments are made:

a. Reference item "Trane Air-Conditioners", para 2f(1), page 3:

(1) The models for the Trane Air-Conditioners which are supplied with the AC/TSC-82 Vans should read "MAC6V60-360-2 and MAC6V40-340-2." TM 5-4120-263-15 applies to the 36,000 BTU Trane Model MAC6V40-340-2 and TM 5-4120-270-15 applies to the 60,000 BTU Trane Model MAC6V60-360-2.

(2) An error was made in identification of repair parts received. Parts which were provided by Trane for the air-conditioners are the correct parts for the respective models. Coordination with MACOM representatives reveals that the TM's for repair parts are not available at this time. Recommend that publication and distribution of repair parts manuals be expedited.

b. Reference item "Oil Filters", para 2g(1), page 4. No comment to the validity of this lesson learned can be given at this time with the data provided. Action is being taken to determine the type of generator used. This review will also include the determination of proper maintenance intervals and the type oil filters required and supplied for the generator.

FOR THE COMMANDER:

O. V. SCHERLINE
Major, AGC
Adjutant General

CF:

Commanding General, US Army Strategic Communications Command, ATTN:
SCC-OPS-RP, Ft Huachuca, Arizona 85613

Commanding Officer, USA Regional Communications Group, APO 96243

Commanding Officer, 361st Signal Battalion, APO 96392

AVHGC-DST (2 Feb 70) 3d Ind

SUBJECT: Operational Report - Lessons Learned, 361st Signal Battalion
Period Ending 31 January 1970, RCS CSFOR-65 (R2)

HEADQUARTERS, UNITED STATES ARMY VIETNAM, APO San Francisco 96375 2 MAR 1970

THRU: Commanding General, United States Army Strategic Communications
Command-Pacific, APO 96557

TO: Commander in Chief, United States Army, Pacific, ATTN: GPOP-DT,
APO 96558

1. This headquarters has reviewed the Operational Report-Lessons Learned
for the quarterly period ending 31 January 1970 from Headquarters, 361st
Signal Battalion and concurs with the comments of indorsing headquarters.

2. Comments follow:

a. Reference item concerning "Trane Air Conditioners", page 3,
paragraph f(1); concur with 2nd indorsement. Recommend that DA take
action to publish an appropriate technical manual for repair parts.

b. Reference item concerning page 4, paragraph 2g(2); concur. An
information copy of the trouble ticket should be provided to the distant
station whenever trouble shooting any high priority circuit. Since RCG
operates the TCG's, the suggestion can be adopted locally.

FOR THE COMMANDER:

C. E. MCCHES
MAJ, AGC
Assistant Adjutant General

Cy furn:
361 Sig Bn
1st Sig Bde

1D

SCCP-OP3 (2 Feb 70) 4th Ind

SUBJECT: 'Operational Report - Lessons Learned 361st Signal Battalion,
Period Ending 31 January 1970, RCS CSFOR-65 (R2)

Headquarters, U.S. Army Strategic Communications Command-Pacific,
APO San Francisco 96557 1 7 APR 1970

TO: Commander in Chief, U.S. Army, Pacific, ATTN: GPOP-DT, APO 96558

1. Subject report is forwarded in accordance with AR 525-15.
2. This headquarters has received subject report and offers the following comments:

a. Reference paragraph 2g(2), pages 4-5 and paragraph 2b, 3rd Indorsement: The recommended procedure, as stated, is not feasible due to the distances involved between Technical Control Facilities. The procedures prescribed in DCA Circular 310-70-1, Volume II (Technical Control Procedures) Chapter 2, paragraph 3, are considered adequate.

b. Concur with the remainder of the report as indorsed.

FOR THE COMMANDER:

Frank C. Mahin

FRANK C. MAHIN
COL, GS
Chief of Staff

CF:

Commanding General, U.S. Army, Vietnam, APO 96375

Commanding General, 1st Signal Brigade (USASTRATCOM), APO 96384

Commanding Officer, Regional Communications Group (USASTRATCOM), APO 96243

Commanding Officer, 361st Signal Battalion (USASTRATCOM), APO 96392

GPOP-DT (2 Feb 70) 5th Ind

SUBJECT: Operational Report of HQ, 361st Signal Battalion for Period
Ending 31 January 1970, RCS CSFOR-65 (R2)

HQ, US Army, Pacific, APO San Francisco 96558 21 APR 70

THRU: Commanding General, US Army Strategic Communications Command,
Fort Huachuca, Arizona 85613

TO: Assistant Chief of Staff for Force Development, Department of the
Army, Washington, D. C. 20310

This headquarters concurs in subject report as indorsed.

FOR THE COMMANDER IN CHIEF:

D.D.Cline

D.D. CLINE

2LT, AGC

Asst AG

CC:

DA, ACSFOR

CG, USASTRATCOM-PAC

SCC-PO (2 Feb 70) 6th Ind

SUBJECT: Operational Report of HQ, 361st Signal Battalion for Period
Ending 31 January 1970, RCS CSFOR-65 (R2)

HQ, US Army Strategic Communications Command, Ft Huachuca, AZ 85613

27 APR 1970

TO: Assistant Chief of Staff for Force Development, Department of the
Army, Washington, D. C. 20310

This headquarters concurs in subject report as indorsed.

FOR THE COMMANDER:

for Donald R. Polston, USA
W. O. POLSTON
Maj., AGC
Asst Adj Gen

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CO, 361st Signal Battalion

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13. ABSTRACT